ZWGE1203 3-Port Gigabit Fiber Optic Media Convertor

DATA SHEET

WUHAN CONVANS OPTICAL TECHNOLOGY CO., LTD.
www.convans.com
Version：V1.0

Safety Instruction

This product has good performance and stability, and should be kept from damaging or destroying.

- Please carefully read the user manual before use.
- Do not put the equipment near water or humility place .
- Do not put anything around power or fiber .
- To avoid fire, please do not pack or knot fiber .
- Please check frequently if the power connector and other equipment connection are fixed well .
- Please keep fiber socket and plug clean. When the equipment is working, please do not see the fiber cross section directly.
- Please keep the equipment clean. If need, can be wiped by soft cotton cloth.
- Do not repair the equipment by yourself, otheiwise indicated in user manual.

If the below conditions occur, please cut off the power immediately, and contact with MAIWE company soon .

- Equipment watered.
- Equipment damaged or enclosure damaged .
- Equipment working in unnormal, or its performance already changed.
- Equipment has noise , smell, or smog .

Content

I. PODUCT INTODUCTION ..... - 4 -

1.1 ABOUT ZWGE1203 ..... - 4 -

1.2 FEATURES ..... - 4 -

1.3 PACKING LIST ..... - 4 -

II. TECHINICAL SPECIFICATION ..... - 4 -

III. HARDWARE STRUCTURE ..... - 5 -

2.1 HOUSE PROTECTION ..... - 5 -

2.2 FRONT PANEL ..... - 5 -

2.3 LED INDICATOR ..... - 6 -

2.4 POWER INPUT TERMINAL BLOCK ..... - 6 -

IV. HARDWARE INSTALLATION ..... - 7 -

4.1 MOUNT ZWGE1203 TO DIN-RAIL ..... - 7 -

4.2 CABLE CONNECTION ..... - 7 -

V. TESTING GUIDE ..... - 8 -

5.1 SELF-EXAMINATION ..... - 8 -

5.2 RJ45 PORT TESTING ..... - 8 -

5.3 FIBER OPTIC PORT TESTING ..... - 9 -

VI. PRODUCT SELECTION ..... - 9 -

VII. QUALITY WARRANTY ..... - 10 -

I. Poduct Intoduction

1.1 About ZWGE1203

ZWGE1203 is a high performance 3-port gigabit fiber optic meida converter with 2x 10/100/1000M-TX and 1x1000Base-FX. The two Ethernet RJ45 ports support auto-sense 10/100/1000M, and the fiber port is gigabit SFP module.

1.2 Features

- Data process mode: store and forward mechanism.
- Broadcast storm suppression
- Support max. data frame 1632 bytes
- Ethernet ports auto-negotiation 10/100/100M and auto-sense MDI/MDI-X, 10Base-T/100Base-TX support full duplex or semi-duplex, and 1000Base-T supports full duplex.
- 1000Base-X fiber port is SFP slot and supports gigabit SFP module.
- Comliant IEEE802.3，IEEE802.3u，IEEE802.3ab，IEEE802.z，IEEE802.3x standard.
- Power supply: DC10~48V.
- Built-in reliable over-current, overheating, prevention of feedback protection and EMC.
- Use environmental protection material space 5.08 power input terminals.
- Efficient no fan heat dissipation design, operating in -40~75℃。
- Rugged metal house to keep the device work well in harsh industrial environment.
- Provide standard Din-Rail mounting and other mounting accessories.

1.3 Packing list

The below materials are contained in the package. If anything missed or damaged, please contact MAIWE customer service center or the distributors you buy from, we are glad to help you.

Items	Quantity
ZWGE1203 Gigabit Fiber Optic Media Converter	1pc
User Manual	1pc
Poduct Warranty	1pc

II. Techinical Specification

Item	Description
Ethernet Port	2x10Base-T/100Base-TX/1000Base-T
Fiber Port	1x1000Base-X
Systerm Parameter	Compliant IEEE802.3，IEEE802.3u，IEEE802.3ab，IEEE802.z Store and forward mechanism Forward data rate：4.464Mpps MAC address：1K

	Broadcast strom suppression
Ethernet Parameter	Physical interface：RJ-45(shield) RJ-45port：10Base-T/100Base-TX/1000Base-T auto-negotiation Distance：100m（CAT5，CAT5e network cable）
Fiber Port Parameter	Wavelength： 850/1310nm(MM);1310/1550nm(SM) Distance：550m(850nm); 10/40km(1310nm);60/80km(1550nm) Port type： SFP slot (shield) Data rate： 1000Mbps
Power Supply	Voltage：DC12V/24V/48V，non isolated，single power input DC12V，isolated，single power input Power consumption：0.7W@12VDC (no-load)； 2.8W@12VDC (isolated full-load)； 3.3W@12VDC (non-isolated full-load) Built-in over current protection
Mechanical Parameter	Metal house, no fan design. Dimension：33×114×80.2mm (DIN-Rial not included) IP40 casing protection class DIN-Rial mounting Weight：0.286KG
Work Environment	Operating temperature：-40℃～+75℃ Storage temperature：-45℃～+85℃ Humidity：0～95%（no condensing）

III. Hardware Structure

2.1 House Protection

ZWGE1203 is equipped in a rugged metal house with IP40 casing protection class. The left and right of enclosure is specially designed as a part of heat dissipation system. It breaks the tranditional fan cooling. The outline size of ZWGE1203 is 33×114mm×80.2mm (DIN-Rail not included). This device provides Din-Rail mounting.

2.2 Front Panel

ZWGE1203 converter integrates 2x10Base-T/100Base-TX/1000Base-T RJ45 Ethernet ports and 1x000Base-X optic port on the front panel.

Fig. 2-1 Front Panel

2.3 LED Indicator

The LED indicators on the front panel are to help user troubleshoot.

Symbol	Status	Description
PWR	On	Power supply ok.
	Off	Power supply fault
RUN	Blinking	Device runs ok
	Off	Device runs fault
Ethernet RJ45 Port LED		
SD	On	Fiber port link actived.
	Blinking	Data transmitted/reveived from fiber port
	Off	Fiber port link inactived.
RJ45 Ports LEDs		
Each RJ45 port has two LED indicators, the yellow one for Link Budget indication, and the green one for port data rate indication.		
10M/100M (Yellow)	On	Working at 1000M (1000Base-T)
	Off	Working at 10/100M (10Base-T/100Base-TX)
LNK/ACT (Green）	On	RJ45 port link actived
	Blinking	Data transmitted/received from RJ45 port.
	Off	RJ45 port link inactived.

2.4 Power Input Terminal Block

ZWGE1203 provides a 2-wire 5.08mm space terminal block for power input. It supports non-isolated DC12V, DC24V and DC48V, or isolated DC12V power supply.

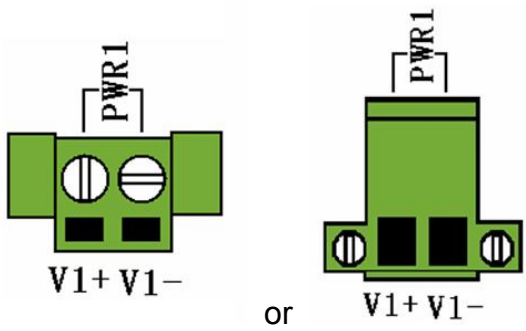


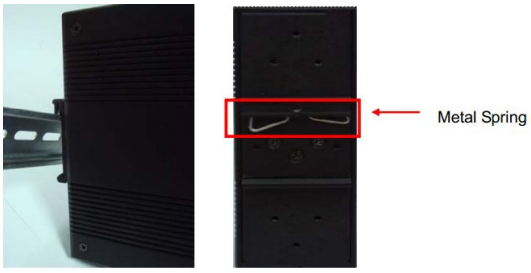
Fig. 2-1ZWGE1203 Power Input Terminals

IV. Hardware Installation

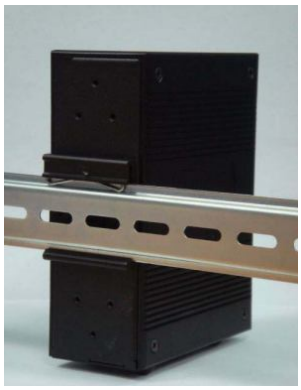
4.1 Mount ZWGE1203 to Din-Rail

ZWGE1203 provides standard 35mm DIN-Rail kits on rear panel. User can easily fix the device on DIN-Rail.

Step 1: Slant the device and mount the metal spring to DIN-Rail.



Step 2: Push the device toward the DIN-Rail until you heard a “click” sound.



4.2 Cable Connection

- **RJ45 Port Twisted-Pair**

  Use straight through TP to connect ZWGE1203’s RJ45 ports with terminal equipment’s, and use cross-over TP to connect ZWGE1203’s RJ45 ports with network equipment’s.

- **Fiber Cable**

  ZWGE1203 offers 1x1000base-X full duplex SFP slot, and it supports single

mode and multimode gibagit SFP hot pluggable module with LC connector. The SFP connector should work in paits, and its TX is connected with the external equipment's RX and RX is connected with the external equipment's TX.

Fig. 4-1 SFP Module

Notes:

1) This device uses class 1 laser to transmit signal over fiber cable. It is safe to our eyes in normal operation. But when the device is powered on, please do not directly look at the fiber transmitting port and end face.

2) Please keep the fiber cable head clean. If it is not clean, that will influence communication, and the data rate maybe lower. If needed, can be wiped by soft cotton cloth.

- **Power Cable**

Please DO follow the power supply label on the device to connect the power cable.

V. Testing Guide

5.1 Self-Examination

When the device is powered on, all LED indicators are blinking, that means all the ports are working well. Later PWR and RUN indicators flash every 1 second.

5.2 RJ45 Port Testing

As shown in figure 5-1, when the device is powered on, use straight-through TP to connect the two RJ45 ports with two testing PCs' network interfaces, and then send Ping command to each other. If both sides get right Ping message, and no data packets are lost. Meantime the corresponding ports' yellow LEDs are on (the PC network card works at 1000M) or off (the PC network card works at 10/100M), and the green LEDs are blinking, it means the two RJ45 ports are testing ok.

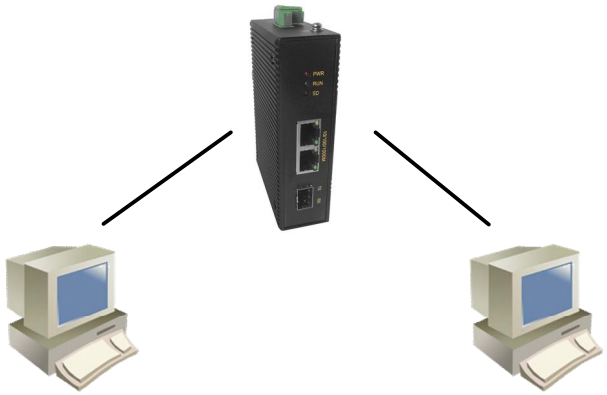


Fig. 5-1 10/100/1000Base-TX RJ45 Port Testing

5.3 Fiber Optic Port Testing

Please follow the diagram below, use two ZWGE1203 and two PCs to build a network, and then send Ping command to each other. If both sides get right Ping message, and no data packets are lost, it means the two optic ports are testing ok.

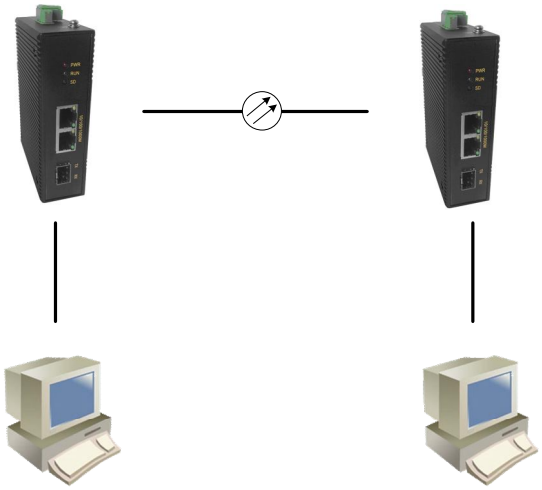


Fig.5-2 1000Base-X Optic Port Testing

VI. Product Selection

Model	Description
ZWGE1203-P	2x10/100/10000Base-TX + 1x1000Base-FX, multimode,LC, 500m
ZWGE1203-S	2x10/100/10000Base-TX + 1x1000Base-FX, single mode, LC, 10/40/80km

Note:

The device supports non-isolated DC12V, DC24V and DC48V, or isolated DC12V power supply, kindly please confirm with our salesman before you place an order.

VII. Quality Warranty

All products CONVANS sell are 5 years quality warranty. In warranty time if products have any problem or function operation fault, we will repair or replace a new one for free in one year.

Attention please, the above does not cover the damages by un-normal usage, unexpected affairs, natural disaster, wrong operation or installation caused.